# FLIGHT

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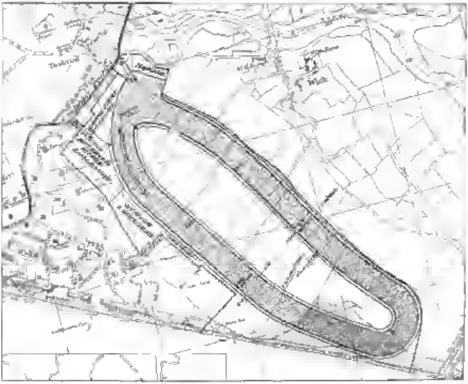


BOURNEMOUTH INTERNATIONAL FLIGHT MEETING, JULY 1[illegible] Plan of the flying grounds.

# THE FLYING GROUND DIFFICULTY.

By R. E. MACFIE.

In view [illegible] the fact that many budding aviators are held up for want of a suitable ground to learn on, perhaps my experience in looking for a ground for the last six months may save trouble, time and expense to those just commencing a similar search.

Before going further let us settle what constitutes a satisfactory flying ground to learn on, with a machine fitted with wheels. These remarks do not apply to Wright machines, which are launched into the air from another machine, and can come down on a ploughed field. To take the average case, we will suppose the aviator has a machine of his own construction which has never yet flown, and that he himself has no experience of actual flying, but proposes to learn on his own machine. We will also suppose [illegible]. In this case we must have a fairly flat ground, smooth enough [illegible] than six inches, hillocks, and soft swampy patches. [illegible] very [illegible] also [illegible] flying machine in the hands of an unskilled [illegible] enough speed to [illegible] it be [illegible] the late M. Delagrange. [illegible] ditches and soft swampy patches are dangerous [illegible] they are running along the [illegible] and come upon [illegible] sufficiently soft [illegible] very likely stand on [illegible]

Now as to the [illegible] ground. [illegible] the long [illegible] of the [illegible] several hundred yards run before [illegible] to fly with his [illegible] E.N.V. engine he could seldom [illegible] yards, and often required more, [illegible] than [illegible] yards. Again, [illegible] a complete [illegible] yards straight flying, [illegible] to slow up [illegible] a triangle, we want [illegible] three-quarters of a mile [illegible]. As a start [illegible] be made [illegible] the [illegible] ground should be three-quarters of a mile square, unless [illegible] wait for windless days, which [illegible]. To land on the [illegible] like the E.N.V. [illegible] and handled by a beginner [illegible] what can we expect from an average beginner [illegible] machine. A ground three-quarters of a mile square is not too much. For quick [illegible] such as the "Blériot XI," probably [illegible] the possibility of [illegible] probably find it better [illegible]. There was also [illegible]

Such a ground as the above is a very difficult thing to find in England in the winter [illegible]. In summer time there are many stretches of hard sand where [illegible] an excellent practice ground, but in winter there are nearly always wind-swept, such as the Maplin Sands, near Shoeburyness.

A common argument put forward by flying experts who have never flown is that if a man has enough pluck he can learn to fly on any ground where a flat patch can be found large enough to rise from. Let him start on his first patch, [illegible] and fly over any obstructions in the way of hedges, ditches, and [illegible]. This method has been tried and found wanting by several people, including the writer. [illegible] which [illegible] be a wealthy man to stand the expense of [illegible] Making flights of 200 yards is a very different thing to being a competent aviator.

The [illegible] by going to France the ground difficulty would be solved. [illegible] people there who are also held up on account of the ground question. There are only two grounds [illegible] wheeled machines in the winter time. One is Mourmelon, [illegible] have to pay [illegible] a day [illegible] eight, [illegible] ten francs [illegible]. The [illegible] Sundays. The ground [illegible] M. [illegible] There are [illegible] other grounds [illegible]

The new [illegible] ground [illegible] have serious disadvantages [illegible] point out [illegible] wheeled machine in England—M. Cody [illegible] War Office [illegible]

## List of Grounds in France.

**Issy-les-Moulineaux.**—A [illegible] suburb of Paris. Flying only permitted between [illegible] a.m. and [illegible] p.m. Hangars expensive and ground often wet and muddy in winter. Would not [illegible] because [illegible] Rougier engine [illegible]

**Juvisy.**—Twenty [illegible] from Paris. Hangars [illegible] afterwards. Ground generally soft and difficult to rise from [illegible] was [illegible] machine totally submerged.

**Mourmelon.**—At Camp de Chalons, near Rheims, [illegible] ground. [illegible] Splendid ground but frequently windy in the winter time. About one fortnight's flying [illegible] per week, so the expense is great.

**Pau.**—Two grounds belonging to municipality. Wright uses [illegible] [illegible]. [illegible] [illegible] [illegible] make of machines are wanted. Splendid ground and weather in winter.

**Nice.**—A new aerodrome has been started here, but it is exposed and rough. Little wind.

**Croix d'Hins, Near Bordeaux.**—A large space, 6 kilometres square, has been cleared of [illegible] and trees. A ring and [illegible] has been put round the ground, but owing to the clean [illegible] not having [illegible] [illegible] a few weeks ago this was [illegible] the [illegible] [illegible] [illegible]. The ground is [illegible] fairly rough except in small patches [illegible] and stumps still remaining. The late M. Delagrange was [illegible] the only aviator flying in [illegible]. The ground [illegible] this winter, making it [illegible] short run and powerful engine [illegible] [illegible] [illegible]. Generally good weather in the winter time. The management [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] free of charge, [illegible] their [illegible] [illegible] them, and giving them every help.

### List of British Grounds.

**Brooklands.**—Sheds £[illegible] [illegible] [illegible] [illegible] per annum, [illegible] [illegible] right to use interior of track except [illegible] [illegible] [illegible] green.

**Wembley.**—[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] ground [illegible] [illegible] [illegible] ground [illegible] [illegible] [illegible] shed.

**Park Royal.**—[illegible] [illegible] [illegible] [illegible] [illegible]

**Hounslow Heath.**—Long [illegible] [illegible] permission from War Office. Difficulties [illegible] much [illegible].

**Hendon.**—Very promising [illegible] [illegible].

**Wormwood Scrubbs.**—Difficult to get permission. This applies also to nearly all grounds controlled by the War Office, Borough Councils and the Jockey Club.

**Fambridge, Essex.**—Late [illegible] [illegible] [illegible] [illegible] now abandoned as a flying ground. Not enough smooth ground, too many drainage ditches, about [illegible] deep [illegible] broad.

Large field opposite [illegible] [illegible] from Fambridge station [illegible]. Too many drainage ditches intersecting.

**Rochford, Essex.**—Several large [illegible] about [illegible] mile square, recently meadow land, now ploughed up.

**Large Fields near Southend.**—Now under cultivation.

**Maplin Sands, Essex.**—[illegible] [illegible] [illegible] finest natural aerodrome in England. [illegible] [illegible] [illegible] [illegible] [illegible] in winter rain dangerous, [illegible] [illegible] permission [illegible].

**Camber Sands near Rye, Sussex.**—[illegible] [illegible] [illegible] soft patches which might [illegible] aeroplane [illegible] [illegible] probable [illegible] [illegible] obtained. [illegible] [illegible] Address Mr. [illegible] Neal, [illegible].

The [illegible] of the Royal Aero Club at Shellbeach [illegible] Eastchurch [illegible] [illegible] [illegible] members of the Club.

◆ ◆ ◆ ◆

## THE PILCHER GLIDER.

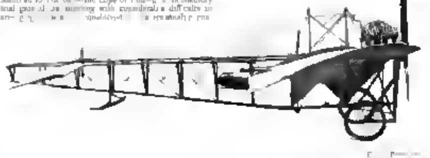
Mr. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] have an interesting [illegible] [illegible] [illegible] being [illegible] [illegible] history of [illegible] [illegible]. Mr. Miller writes as follows:—

> [illegible] [illegible] [illegible] [illegible] the late Mr. Pilcher [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] "The Hawk" [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] through the [illegible] [illegible] [illegible]

Huntingdon Old Race Course, which is being prepared [illegible] [illegible] [illegible] [illegible] [illegible] railways. The recent phenomenal rains have [illegible] [illegible] [illegible] unusual [illegible] [illegible]

# THE MACFIE BRITISH AEROPLANE.

Some [illegible] ago, [illegible] our readers may remember, [illegible] experiments were carried on [illegible] the Maplin Sands by Mr. Macfie, who succeeded in making a [illegible] jump before the military authorities in charge of the gunnery range. [illegible] these experiments [illegible] be eventually abandoned, Mr. Macfie transferred his machine to France in the hope of finding [illegible] satisfactory trial ground, [illegible] meeting with considerable difficulties [illegible]



Side view of the Macfie monoplane.

Flight Copyright.

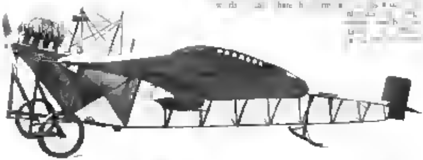
[illegible] under which [illegible] experiments [illegible] has once [illegible] England and [illegible] now about [illegible] further trials [illegible].

"The Macfie monoplane is interesting [illegible] lines [illegible] and [illegible] somewhat [illegible] Antoinette type [illegible]

### The Frame.

The frame of the machine is a light [illegible] about [illegible] ft. deep at the forward end [illegible]. The [illegible] two top [illegible] from [illegible]. The extremity of the frame [illegible] parts being [illegible]

The [illegible]

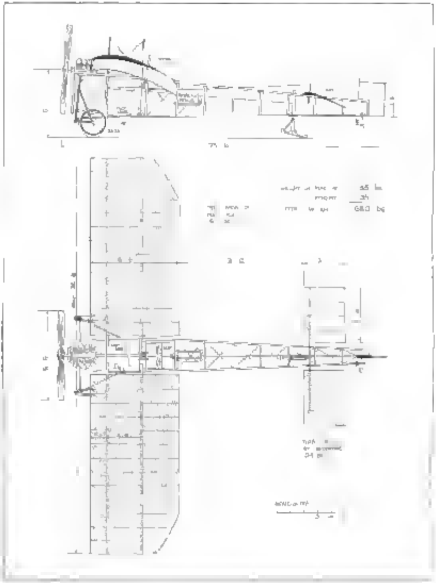


View of the Macfie monoplane [illegible]

Flight Copyright.

The [illegible] notice that [illegible] and who [illegible] section [illegible] the frame [illegible] on a skid [illegible] rear part of the frame [illegible] and a rudder [illegible] between the wings and the [illegible], which [illegible] wing-warping, is effected by [illegible] pedal [illegible] of [illegible] to aid [illegible], in the [illegible] of the Macfie aeroplane. An accompanying sketch shows clearly how the [illegible] are made.

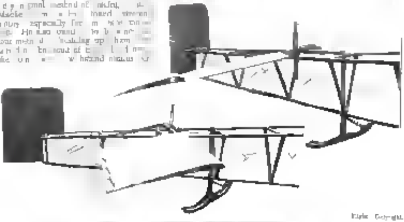
The [illegible] against the [illegible] spars, but [illegible]. Their [illegible] effected by the use of [illegible] plates that are [illegible] members by [illegible] fine [illegible] tape. The tape [illegible]



The Macfie Aeroplane.

[illegible] This [illegible] method of [illegible] Mr. Macfie [illegible] especially [illegible] He also [illegible] [illegible] [illegible]

[illegible] of the accompanying sketch [illegible]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Two views of the tail [illegible] the Macfie [illegible] [illegible] elevating plane and [illegible] rudder.

well finished. [illegible] When [illegible]

[illegible] plane is [illegible] [illegible] may be [illegible] supported [illegible]


[illegible] three-wheeled chassis [illegible] supports [illegible] of the Macfie [illegible]

[illegible] the same [illegible] Mr. Macfie [illegible]

[illegible] There [illegible] and fall [illegible] connection by a light [illegible] shown in the sketch above.

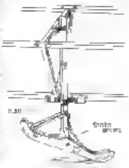


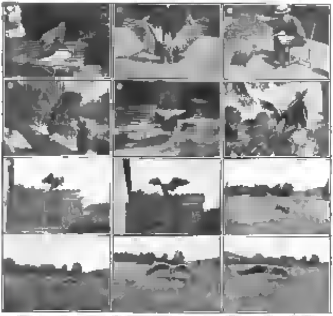
Fig. [illegible]

Sketch showing the mounting of the skid [illegible] to [illegible] tail end of the Macfie monoplane.

*(To be continued.)*

# HOW A BIRD LEARNED TO FLY.

[illegible]



FLYING.—[illegible] acquire the art of flying. [illegible]

[illegible] needed [illegible] vulture [illegible] spread [illegible] wings [illegible] Should we [illegible] owing [illegible] The following [illegible] interesting [illegible] that [illegible] has not had [illegible] opportunity [illegible] his parents [illegible] attempts. [illegible] for his health. You [illegible]

[illegible]

spite of the efforts of his adopted father, to console and to induce him to start and practise gliding from the top of a [illegible] wall which surrounded a field. He was so [illegible] that he was finally pushed off a roof, but to everyone's great surprise it was then found that "Cicco" [illegible] could not fly (Fig. 6). He fell like a lump after [illegible] spread his wings in a vague and undecided sort of way. I was unable to [illegible] that this was really the case, so I tried again. The second time he [illegible] down on the ground just about five metres [illegible] only under the point [illegible] which he [illegible]. I [illegible] begged his pardon, [illegible] he was really very much upset, and [illegible] had a heart attack and was very ill the whole evening afterwards.

"[illegible] of October he was [illegible] on nearly and [illegible] (Figs. [illegible] and [illegible]) [illegible] wings [illegible] from the [illegible]. Next [illegible] middle of a big field [illegible] and started to run like Santos Dumont [illegible] which done he got gradually more [illegible].

"[illegible] continued by jumping on [illegible] and beating his wings [illegible] time [illegible]. These jumps became more frequent, and increased [illegible] length and speed [illegible] according as the speed he grew up [illegible] (Figs. [illegible]), till finally he [illegible] up a [illegible] speed [illegible] his last jump to leave the ground definitely and to continue [illegible] at [illegible] metres above the surface [illegible]. [illegible] way he covered [illegible] in the [illegible], and then [illegible] metres [illegible], exactly like Santos Dumont. He had come to the point at which he was progressing from flight to flight.

"Another [illegible] of experiments which he carried out consisted of jumping into the air [illegible] metres. To induce him to do this, we placed him in a small yard which was walled in on three sides by buildings, the fourth being closed up by a wall of 2½ metres in height. He disliked remaining in this little courtyard, and, after two or three jumps and beating with his wings, he succeeded in rising high enough to get on the top of the wall, from which he glided down into the field. How did he get out of this narrow space when he [illegible] in an open field? Possibly some current of air between the buildings assisted him [illegible] made his effort [illegible]. The [illegible] deceived.

"Finally, on the [illegible] of October, he had become a [illegible]. He flew [illegible] 300 metres through the air and returned to his point of departure, [illegible] without allowing [illegible] to the [illegible]. A [illegible] which he [illegible] 55 [illegible] increased in length, but he always [illegible].

"Unfortunately, he had not the dread of mankind possessed by his wild brethren [illegible] of those [illegible] with a gun, who must kill everything they can get near [illegible] and [illegible] approaching the [illegible] silken band round his neck.

* * *

# THE "G. AND J." BIPLANE.

Following upon [illegible] with the "Bird of Passage" and [illegible] different types, Mr. A. F. [illegible] the Newcastle works of George and Jobling a new biplane which somewhat [illegible] the Curtiss type. It, however, embodies several [illegible], which have been designed by M. [illegible] experience.

The total supporting area of the [illegible], including tail, elevator and [illegible], is 438 sq. ft., and the total weight is 680 lbs. The single [illegible] propeller [illegible] by means of a [illegible] from [illegible] and [illegible] thrust of [illegible] lbs.

The [illegible] features. This is [illegible] a steering wheel placed vertically and actuates the rudder, elevator [illegible] and [illegible] done [illegible], and each movement does not interfere with any other.

The chassis, which [illegible] along [illegible] supporting wheels and landing skids. The [illegible] are [illegible] placed as [illegible] the lower supporting surface.

* * *

## Progress and Prospects of the Gyroscope.

[illegible] it is at present [illegible] the [illegible] to which gyroscopic control may or may not be found [illegible] in connection with [illegible] of every kind, [illegible] matters can afford to ignore [illegible] being made in that direction. [illegible], Mr. Louis Brennan, C.B., of torpedo fame, has [illegible] his [illegible] and [illegible] than any other living man, [illegible] occupied [illegible] past.

The [illegible] has [illegible] applied to his mono-rail system of transport, and the very latest of his [illegible] was shown [illegible] to a large party of engineers and pressmen at the Gillingham factory on [illegible] of last week. Full particulars of the Brennan system, so far as [illegible] present known, are given in the [illegible] of this week.

## Municipal Encouragement in Austria.

The Municipal Council of [illegible] 10,000 [illegible] to the management of the Steinfelder flying ground.

## A Large Hall Wanted.

The Aeronautical Society of Great Britain has appointed a Laboratory Committee to investigate various questions of [illegible] of aeronautics. Some of the work in [illegible] will [illegible] from time to time [illegible] of considerable dimensions, and the Society will be glad to hear from anyone who may be willing to assist the Committee by placing accommodation at their disposal. It being of great national import[illegible] that work of this kind should be carried out in this country without delay, it is hoped that this appeal to the oldest aeronautical society in the world will meet with an [illegible] and generous response.

# AIRSHIPS IN PEACE AND WAR

R. P. HEARNE

[illegible]

CANTERLAND RAIDED? A map showing [illegible] from the principal [illegible] [illegible] by Mr. R. P. Hearne.

[illegible] directly into the [illegible] which [illegible] both with regard to airships and aeroplanes, [illegible] to compare.

[illegible]

[illegible] Hearne [illegible]

[illegible]

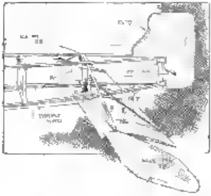
War between Continental nation Y and [illegible] X, the former using airships. Reproduced from "[illegible] in Peace and War."

[illegible] has greater [illegible] than an [illegible]

[illegible]

# FURTHER DETAILS OF THE BLÉRIOT CROSS-CHANNEL FLYER.

We have prepared the accompanying sketches primarily in order to answer certain points raised by a correspondent, F. W. Bramley, whose letter appears this week. There has been so much correspondence about



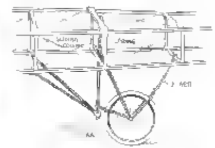
this machine, however, that the following remarks relating to the details in question will doubtless have a wider interest. We have consequently thought proper to deal with them here in full.

One of the two sketches shown herewith represents the wheel at the rear of the machine. The diameter of this wheel has not previously been given; it measures [illegible]. An interesting point of detail to which attention may be drawn in connection with the construction of this wheel is the use of a piece of elastic anchoring the wheel bracket to the chassis frame. The [illegible] in which it is pivoted to a vertical post that is braced substantially to the chassis frame. In addition to this pivotal [illegible] the forks are also hinged and mounted in such a manner as to afford a spring suspension. The spring is situated at the top of the vertical post in the position indicated by the sketch. The object of the elastic is, of course, to keep the wheel in line ready for landing, but at the same time it does not interfere with the free swivelling of the wheel when the machine is running along the ground.

The other sketch shows in very complete detail the construction and arrangement of the tail of the Blériot cross-Channel flyer. It affords answers to all the questions raised by our correspondent. The tail is supported on a steel tube, A, by aluminium brackets, C, clamped to the main spars of the frame. The steel tube forming the main transverse member of the tail is braced by a flat strip steel tie-bar, B, that extends from the tip of the main frame to the junction of the tail with the elevating flaps.

Further support for the tail is afforded by the diagonal struts, E, made of light steel tubes that pass from the trailing edge of the tail plane to vertical uprights in the main frame of the chassis. This latter attachment is so arranged as to afford an adjustment whereby the angle of incidence of the tail can be varied. The small perforated bracket F is similarly made adjustable for the same purpose.

The operation of the elevating flaps, which are mounted at the extremity of the central tail plane, is effected by



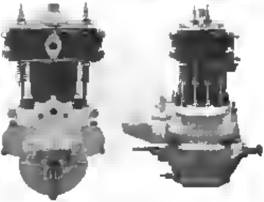
means of the small transverse tubular spar, A. The elevating flaps are fixed to this spar, as also is the control lever D, that is connected by wires to the operating lever under the pilot's control. The main [illegible] of course, rock on its bracket. The entire portion of the tail plane is not variable in flight, but can be adjusted as already described.

The above illustration shows an interesting part of the Blériot monoplane's [illegible] position. It is one of Mr. Claude Grahame-White's machines that is now being experimented with by Mr. R. W. A. Brewer.

# THE ASTER FLIGHT ENGINE

A GLANCE [illegible] the accompanying photograph [illegible] what is apparently [illegible] engine [illegible] horizontal cylinder. The design [illegible] work of the Aster Company [illegible] model [illegible] which they [illegible] There is [illegible] the photographs [illegible] crank [illegible] and [illegible] in the fact that the cylinders [illegible] so that [illegible] the cylinder [illegible] appearance of a vertical engine. The [illegible] are coupled [illegible] are [illegible] In the [illegible] Aster engine, however, the [illegible] cylinders [illegible] engine, for one [illegible] an ordinary 4-cyl. engine [illegible] represents cylinders [illegible] The firing [illegible] the impulses being received [illegible] two cranks alternately as in a 4-cyl. engine.

A [illegible] 4-cyl. engine, [illegible] pistons, [illegible] between [illegible] centre [illegible] before [illegible] dead centre of the other piston, which is coupled to the same crank pin, and there is consequently [illegible] difference [illegible] periods [illegible] difference [illegible] say the [illegible] in the longitudinal plane. [illegible] period [illegible] and represents the transmission of the working stroke [illegible]



THE ASTER FLIGHT ENGINE.—End and side views of the new engine, which has the appearance of a twin-cylinder engine, but in reality has four cylinders arranged obliquely in pairs. The pistons are connected to a two-throw crankshaft.

View of the [illegible] Aster [illegible] The [illegible] are arranged V fashion, and not in line.

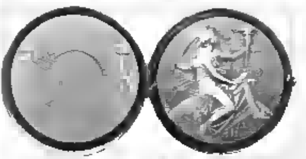
cylinder [illegible] diagonally opposite [illegible] that [illegible] sequence [illegible] same [illegible] crankshaft, therefore, has to make up [illegible] heavy flywheel [illegible] third period in the cycle is a matter of [illegible] because the [illegible] in the longitudinal place, not the first and last periods [illegible] as a transferring [illegible] on the crankshaft [illegible] compared [illegible] balanced 4-cyl. engine of the ordinary type [illegible] designed [illegible] model has been designed. In some respects difficulty [illegible] the working of the [illegible] but even [illegible] special [illegible] primary [illegible] in addition [illegible] quadrant.

There is [illegible] engine of this [illegible] that at the necessity of [illegible] provision [illegible] to clear one another [illegible] cylinders are [illegible] the [illegible] effect [illegible] gradually [illegible] like the blades of a [illegible] until finally the trunks of the pistons overlap [illegible] can be drawn [illegible] In order to [illegible]

[illegible]

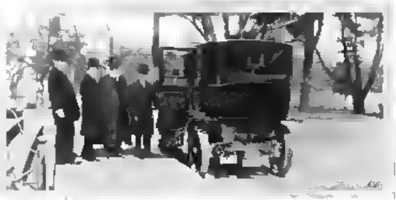
## LANGLEY MEDAL PRESENTED TO WRIGHT BROS

[illegible] the Hon. Jas. S. Sherman [illegible]



THE FIRST LANGLEY MEDAL.—Presented [illegible] Bros. Wright.

[illegible]



The Wright Bros. leaving the Smithsonian Institution after the Presentation of the Langley Medal. 1. Secretary Chas. D. Walcott. 2. Mr. Wilbur Wright. 3. Mr. A. Graham Bell. 4. Mr. Orville Wright.

# MY EARLY EXPERIMENTS.

By SIR HIRAM MAXIM

[illegible] my experiments at Baldwyn's Park. It then appeared [illegible] that it would be possible to make a flying machine [illegible] with a steam engine and [illegible] horse-power.

[illegible] engine and [illegible] light boiler. [illegible] valuable data regarding the action [illegible]

[illegible]

After a [illegible] study and experiment it was [illegible] the best [illegible] system [illegible] at that time [illegible]

[illegible]

[illegible] diagram of the lift was taken [illegible] and [illegible] the machine would lift all the steel rails, after [illegible] would [illegible] when all [illegible] wheels would engage the upper track. This showed most conclusively that the whole weight of the machine was carried by the aeroplanes.

On one occasion [illegible] up and [illegible] forward with [illegible] speed [illegible] up [illegible] the machine [illegible] broke the [illegible] Georgia pine [illegible]

[illegible] one was liberated [illegible] and rose in the [illegible] only for a few seconds, because the Georgia pine [illegible] of the air and [illegible] the great damage [illegible] distance and [illegible]

[illegible]

[illegible] machine [illegible]

[illegible]

* * *

**Henry Farman Building a Monoplane.**

Having produced a biplane with which such extraordinary success has been attained, Mr. Henry Farman has determined [illegible] engaged [illegible] a monoplane, [illegible] expected [illegible] he been making [illegible]

# ROYAL AERO CLUB OF THE UNITED KINGDOM.

## OFFICIAL NOTICES TO MEMBERS.

### Annual General Meeting.

The Annual General Meeting of the members of the Royal Aero Club of the United Kingdom will be held on Thursday, March 10th, 1910, at 5 o'clock, at 166, Piccadilly, London, W.

### Committee.

In accordance with the rules, the Committee shall consist of eighteen members. Members of [illegible] serving [illegible] years, [illegible] the Committee retiring annually. Retiring members are eligible for re-election.

The following members have been nominated:—

[illegible]
Major Sir A. Bannerman, Bart., R.E.
Ernest [illegible] Bucknall.
F. Hedges Butler.
Vice-Admiral Sir Charles Campbell, K.C.M.G., C.B., D.S.O.
Col. J. [illegible] Capper, C.B., R.E.
[illegible] and Cunningham, C.B., [illegible]
Martin Dale.
[illegible] Harrington Edwards.
Philip Gardner.
[illegible]
[illegible]
E. Mansfield.
J. T. C. Moore-Brabazon.
Hon. C. S. Rolls.
[illegible]
A. Mortimer Singer.
[illegible] Stanley Spooner.
R. W. Wallace, K.C.

Ballot papers for the election of the Committee [illegible]

No ballot paper which is signed, or on which the number of candidates voted for is more than [illegible], or which is received at the Club after [illegible] on Wednesday, March 9th, 1910, will be valid.

### Committee Attendances During the Past Year.

Meetings held 45.

| Name. | Attendances. | Name. | Attendances. |
|---|---|---|---|
| Griffith Brewer | [illegible] | Earl of [illegible] | [illegible] |
| E. C. Bucknall | 4 | Prof. A. K. Huntington | 36 |
| Sir Chas. Campbell, K.C.M.G., C.B., D.S.O. | [illegible] | V. Ker-Seymer | 32 |
| | 9 | F. K. McClean | [illegible] |
| Col. J. E. Capper, C.B., R.E. | 17 | J. T. C. Moore-Brabazon | 28 |
| Maj. [illegible] | [illegible] | [illegible] | 3 |
| | | Hon. C. S. Rolls | 33 |
| Martin Dale | [illegible] | J. Lyons Sampson | 20 |
| John Dunville | 5 | Stanley Spooner | [illegible] |
| Maj. [illegible] Cunningham, C.B., R.E. | [illegible] | Roger W. Wallace, K.C. | 42 |

### Committee Meeting.

A meeting of the Committee was held on Tuesday, the [illegible], when there were present:—Mr. R. W. Wallace, K.C. (in the chair), Mr. Ernest C. Bucknall, [illegible] Hon. C. S. Rolls, Mr. J. Lyons Sampson, Mr. Stanley Spooner, and [illegible] Harold E. Perrin.

**New Members.**—The following new members were elected:—

Albert Batchelor.
[illegible]
Arthur [illegible] Cooper.
[illegible]
Edwin [illegible] Moon.
[illegible]
Rex Hayes.
C. W. Walker.
Emily Whi[illegible]

### Aero Exhibition at Olympia.

The Aero Exhibition at Olympia [illegible] under the auspices of the Royal Aero Club of the United Kingdom, will open [illegible] March, [illegible] on Saturday [illegible]. Members of the Royal Aero Club [illegible] the [illegible] on production of their [illegible] placed [illegible] the [illegible] during the exhibition.

The exhibit [illegible] the Royal Aero Club will include [illegible] of Mr. J. T. C. Moore-Brabazon [illegible] flight [illegible] models [illegible] properly of [illegible] C. S. Rolls.

### Long Distance Balloon Record.

As soon as the weather permits an attempt will be made to [illegible] the long distance record. A balloon is being constructed with a capacity of [illegible] by Mr. C. [illegible] [illegible] Members of the Club will be [illegible] [illegible]

### Michelin Cup.

[illegible] J. T. C. Moore-Brabazon [illegible] flight [illegible] the Club grounds at Eastchurch [illegible] The competition [illegible] closes on March [illegible] [illegible] [illegible]

### Plates and Books.

Mr. [illegible] has presented to the library [illegible] by [illegible] Rose [illegible]

[illegible]

### Royal Aero Club and [illegible]

[illegible]

Dear Sir, [illegible]

[illegible] collected by the Committee.

[illegible]

[illegible] the Town Clerk [illegible]

[illegible]

This with regard to the [illegible]

[illegible] Aero Club [illegible]

Therefore, taking [illegible]

[illegible]

(Signed) [illegible]

[illegible]

# PROGRESS OF FLIGHT ABOUT THE COUNTRY

[illegible]

**Aviation Association of Ireland**

[illegible]

**Birmingham Aero Club**

[illegible]

**Bristol and West of England Ae.C.**

[illegible]

[illegible] sound [illegible] be assured, petrol [illegible] and the [illegible] be imposed in aerial [illegible] the order of [illegible] which he would like [illegible]

With [illegible] that Mr. [illegible] [illegible] have declined [illegible]

**Midland Aero Club** [illegible] Hotel, Birmingham.

[illegible] Birmingham [illegible] delivered [illegible] the [illegible] on [illegible] the [illegible] of [illegible] the [illegible]

In the course of [illegible] a great deal [illegible] with regard [illegible] and flying-machines. [illegible] They [illegible] ground [illegible] [illegible] make [illegible] speed would send [illegible] or three [illegible] a normal [illegible] very [illegible]

[illegible] be looked [illegible] the day when he would [illegible] down in [illegible] and [illegible] of the [illegible] for the manufacture of aerial machines for military purposes. This was not the only object in such machines. As long as they were fairly safe, and fairly cheap, they would be very greatly used by a great number of people for [illegible] pleasure. Therefore motor [illegible] would [illegible] which would [illegible] of their [illegible]. There [illegible] the [illegible] number of which [illegible] likely to develop [illegible] than [illegible] upon the weather and [illegible]. They would become a very cheap and rapid method of travel.

**Northamptonshire Aero Club** [illegible]

[illegible] large number [illegible] paid a visit [illegible] garage [illegible] type which [illegible] Mr. A. E. [illegible] will [illegible] a paper will be read [illegible] by Mr. [illegible] Hotel.

[illegible]

[illegible] Aeronautical [illegible] arrangements [illegible] been made [illegible] Saturday [illegible] 5th from 3 [illegible] and [illegible] petrol [illegible] engine [illegible]

◆ ◆ ◆ ◆

## WRIGHT BROTHERS AND THEIR PATENTS.

[illegible] action taken [illegible] Wright Brothers [illegible] connection with [illegible] apparently [illegible] be [illegible] America, and an injunction [illegible] served upon [illegible] which [illegible] Farman [illegible] Paulhan machines [illegible] bond [illegible] by [illegible] 5,000 is paid [illegible] in order to allow [illegible] engagements [illegible] Paulhan [illegible] until [illegible] present the [illegible] Wright patent, there [illegible] United [illegible] may be [illegible] the beginning [illegible] engaged [illegible] years over [illegible]

With regard [illegible] announce that they will [illegible] reported [illegible] taking part in [illegible] upon the payment [illegible]

◆ ◆ ◆ ◆

## MODEL COMPETITION AT GODALMING.

[illegible] model aeroplane competition was held at [illegible] Godalming, prizes having been offered by Mr. [illegible] and Mr. [illegible] for the [illegible] model [illegible] which were [illegible] and Mr. [illegible] Long distance [illegible] and [illegible] performance [illegible] somewhat [illegible] in the wind [illegible] photographs [illegible] second [illegible]

Launching a model. G. Cunham, 1st prize. H. Miles, 2nd prize. Judging the flights.

A MODEL AEROPLANE COMPETITION AT HILLSIDE, GODALMING.

# AVIATION NEWS OF THE WEEK.

### Flying at Eastchurch.

On Friday of last week the Hon. C. S. Rolls made a flight of a quarter of an hour's duration, [illegible] the Short-Wright machine. [illegible] Mr. Rolls [illegible] higher altitudes than he has ever previously attained.

In a [illegible] the Dutch [illegible] on Tuesday, Mr. Moore-Brabazon flew at Eastchurch for [illegible], covering about 18 miles in his Short machine.

### Flying at Bradford.

A [illegible] of calm weather on Sunday [illegible] Mr. John House to have a trial with the [illegible] Blackpool, and [illegible] successful flights were made [illegible] Bradford. [illegible] the first attempt Mr. House rose some five or six feet from the ground and travelled between [illegible] yards [illegible] descended. In the second flight the height reached was [illegible] of the machine to earth. Mr. House [illegible] injury [illegible] Work.

### Flying Ground at Bradford.

[illegible] House, [illegible] will be pleased to make arrange[illegible] Bradford. [illegible]

### Mr. A. V. Roe Back at Brooklands.

[illegible] new [illegible] Trembley and [illegible] Brooklands, where, it will [illegible] conducted his earlier experiments, although at the time there [illegible] flying.

### Another Apt Farman Pupil.

In [illegible] of Farman machines [illegible] the art of flying. Mr. [illegible] "Soccer" [illegible] recently took delivery of his Henry Farman machine at Chalons, and on the 28th ult. he had his sixth lesson and flew [illegible] upon two [illegible]. Starting [illegible] o'clock, [illegible] height of about [illegible] metres, and [illegible] that [illegible] around Chalons until the petrol supply ran out when he landed, [illegible] been flying for [illegible] 45 minutes.

### Keller Flies in a Gale.

[illegible] has [illegible] the Antoinette [illegible] at Chalons [illegible] made [illegible] lengthy flights, yet [illegible] seems to [illegible] the damp [illegible]. On Tuesday last he [illegible] in the teeth of [illegible] the rate of [illegible]

### Rougier at Monte Carlo.

[illegible]

### Damage at Pau.

[illegible]

### Capt. Engelhardt at Geneva.

[illegible] Wright flyer [illegible] Capt. Engelhardt [illegible] flight in Switzerland.

### Lieut. Calderara Out Again.

[illegible] his machine [illegible] Calderara [illegible] at Centocelle [illegible] the

Another view of Old [illegible] proposed [illegible] interesting spectacle was seen of an aeroplane flying over the old Roman aqueduct. After this flight Lieut. Calderara gave up his seat to Lieut. Savoia, who made his first solo flight of about ten minutes.

### A Novel Biplane.

On the new biplane which has been designed and built by MM. Guyot and [illegible], and with which they will shortly be conducting trials at Le Damas, the propeller will be placed in front, where it will be driven by a 60-h.p. E.N.V. motor.

### Ae.C.F. Doings.

It has recently been decided by the Ae.C.F. that they will recognise in France the pilots' certificates issued by the Kaiserlicher Aero Club of Germany as equal to those of the Aero Club of France.

Pilot-aviators' certificates have recently been granted to M. Efimoff and M. A. Cheuret, while M. André Schelcher has been given a pilot-aeronaut's certificate.

A sub-committee has been appointed to draw up the regulations for a competition for parachutes for aeroplanes. A sum of 5,000 francs has been placed at the disposal of the committee as prizes for this competition.

### An Aero Club for Norway.

Norway at last has a national Aero Club, which has been formed at Christiania, with Mr. [illegible] Mohn, the well-known meteorologist, as President, and Lieut.-Gen. W. Olssen as Vice-President. Application has been made to the Fédération Aéronautique Internationale for recognition as representing Norway.

### An Altitude Prize.

A prize has been offered at Nice, under certain novel conditions, by M. Barto, who is spending the winter on the Riviera. The Cup, which is of a value of 5,000 frs., will be given to the first aviator who, on two occasions, beats, at Nice, the world's record for height in an aeroplane. Each competitor may only make one record attempt between November 15th and May 1st, and if the prize has not been won by January 1st, 1913, it will then lapse.

### A Carnegie Prize.

From New York it is announced that Mr. Andrew Carnegie has offered a prize of [illegible] for the [illegible] of the Carnegie School of Technology at Pittsburg, who constructs an aeroplane with which satisfactory [illegible] are accomplished.

◆ ◆

# AIRSHIP NEWS.

### Parseval Excursions from Munich.

The garage which the Bavarian Aerial Navigation Company is building at Munich will be [illegible] metres long, 38 metres wide and 26 metres high. This will accommodate the two airships which are being arranged for the passenger services during the coming summer. The fare for the daily excursions which will be made round Munich has been fixed at £[illegible] per person, while for the longer excursion to the Bavarian Alps the fare will be £25 each.

### The New "Parsevals."

Parseval No. V, which is much smaller than any of the others, being only [illegible] cubic metres capacity, [illegible] and "Parseval II" has also been out making trials with a new accidental signalling system, from which good results are said to have been obtained.

Three other craft of this type are under construction at the Bitterfeld works, Nos. VI, [illegible], which are destined for the Parseval [illegible] soon be completed, while No. "VII" is being built for the Brussels Exhibition.

### "Zeppelin III" in Dry Dock.

In order that certain parts of the [illegible] may be remodelled, "Zeppelin III" has been dismantled, [illegible] the framework [illegible] to facilitate the work [illegible].

### An All-Steel Dirigible.

After working [illegible] the Austrian officer Lieut. [illegible] is said to have perfected a system by which he is able to [illegible] of a lighter-than-air [illegible] are arranged [illegible]. The [illegible] arrangement by which the altitude of the machine can be varied at the will of the pilot without using ballast. A [illegible] syndicate has been formed to allow of a full-sized machine being built and tested.

### The Schütte Dirigible.

The wooden framework of the dirigible which is being built at Rheinau by Professor Shutte, of Danzig, is now [illegible]. It will be remembered that this vessel [illegible] Zeppelin, except that the framework is of wood in place of aluminium. It is [illegible] metres in length and [illegible] metres in diameter and will have eleven [illegible]. It will be fitted with twin airscrews driven by a [illegible] h.p. motor.

### German Airship Manœuvres.

It has been decided that the day and night manœuvres with German military airships will take place [illegible] during the second [illegible] of the [illegible]. The [illegible] will take part, [illegible] Zeppelin I, Gross II and Parseval II, and the manœuvres will [illegible] direction of [illegible].

### Mishap with the "España."

On the 23rd inst. an attempt was made to carry out the [illegible] trip with the "España" which the Spanish Government require before they will accept the ship. At midnight the [illegible] preparations were made for an early start. At 5 a.m. everything was ready, and the airship started off with M. Arnault in charge, accompanied by Capt. [illegible], Capt. Kindelan, [illegible] Rousse and Van den Hasse. The [illegible] hours [illegible] the airship cruised above Pau and the environs, [illegible] a low-lying mist, making it impossible for the aeronauts to [illegible] their way and fearing that the vessel might be driven on to the Pyrenees, [illegible]. [illegible] the manœuvre the car came in contact with the tree tops, causing some damage, and the balloonet also suffered from a similar mishap. [illegible] at Lembeye, [illegible] and under these circumstances M. Arnault deemed it prudent to deflate the balloon and [illegible] back to Pau by road. The damage, however, was not serious, and was repaired in a couple of days.

# CORRESPONDENCE.

**** The name and address of the writer (not necessarily for publication) must in all cases accompany letters intended for insertion, or containing queries.*

**Correspondents asking questions relating to articles which they have read in FLIGHT, would much facilitate our work of reference by giving the number of the letter.**

NOTE.—*[illegible]*

## THE BLÉRIOT FLYER.

[560] I have a [illegible] model of the Blériot monoplane, No. [illegible]. There are one or two points in your scale drawings of the machine which [illegible] and I should be very much obliged if you would give me a sketch of the same.

(1) How [illegible] the rudder and elevator fixed and [illegible]

(2) In what way is the small wheel fixed, which supports the back part of the main frame when on the ground?

I may [illegible] that FLIGHT, of which I am a regular [illegible] has helped me [illegible] a great deal with the models which I have made.

[illegible] [illegible] W. [illegible]

[The points raised in the above letter being of very general [illegible] article [illegible] The [illegible] is entitled "Further Details of the Blériot [illegible]

## AERONAUTICS FOR THE NAVY.

[561] [illegible]

[illegible] C. [illegible]

## A [illegible] BLÉRIOT MODEL.

[562] [illegible] model monoplane [illegible] the Blériot type [illegible]

[illegible] in Hampstead Heath. The [illegible] photographs [illegible] first [illegible] model [illegible]

Hampstead. C. A. [illegible]

## THE AEROPLANE [illegible] THE DIRIGIBLE.

[563] [illegible] by W. [illegible] Pritchard, [illegible] forth the advantages and possibilities of the aeroplane [illegible] the dirigible.

[illegible]

Mr. C. A. Beckitt's working model.

at [illegible] when the possibilities of developing aerial travelling as a means of profitable [illegible] will be [illegible] by several [illegible] [illegible] companies, and then the development of the dirigible will [illegible] be rapid and complete.

Mortimer Street, W. [illegible]

[300] In the interesting article by Mr. [illegible] Pritchard, I notice that one large Wright machine is proposed [illegible] for a dirigible. I think, however, that it would be useful to point out the [illegible] difficulties which [illegible] the working of such an aeroplane would be attended.

Not to suppose that [illegible] have been overcome [illegible] the [illegible] aeroplane has been completed [illegible] problem which presents itself is how to [illegible] the machine. It would be necessary for [illegible] the [illegible] Wrights we have a large flat plain in order that the tips of the wings might not strike any point which would be caused by the slightest [illegible] from the horizontal [illegible] the machine had reached a [illegible] height. [illegible] [illegible] than [illegible] would [illegible] in the vertical [illegible]. These considerations also apply [illegible].

And, when the machine is [illegible], it would [illegible] difficult to [illegible] [illegible] landing would be a [illegible] impossible [illegible].

[illegible] these disadvantages [illegible] the [illegible] would be [illegible] would still [illegible] the ordinary [illegible] its slowness [illegible] and incapability of remaining [illegible] would present a broad target [illegible] which [illegible] the [illegible] attack the [illegible] damage to [illegible] either [illegible] of all damaging the [illegible] would [illegible] the [illegible] of the [illegible] make an immediate landing [illegible] a large [illegible] advantages of [illegible] smaller [illegible] would also present a target almost equal [illegible].

This [illegible] the Zeppelin, but if an [illegible] [illegible] the proposed path of an enemy's dirigible, [illegible] be easy for the pair to swoop down and [illegible] opponent.

[illegible] I think that, if [illegible] its [illegible] our machines [illegible] large aeroplane [illegible] might be produced [illegible] that [illegible] be [illegible].

H. [illegible]

## THE "MAYFLY"

[301] I should like to thank Mr. [illegible] for his instructions [illegible] the [illegible] [illegible] days after my letter (289) appeared in [illegible] Aeroplane Company very courteously wrote me instructions, with a sketch of their method of bending with [illegible]. I got the [illegible] but it certainly [illegible] The "Mayfly" has not [illegible] their own work and cannot always [illegible]. The last [illegible] very well. [illegible] field, so I took them off again. [illegible] and also did a [illegible] glide [illegible] the [illegible] I should [illegible] don't like to let her go so high [illegible] with her on the end of the [illegible]. [illegible] dropped off [illegible] rope went [illegible] rope to the [illegible] [illegible] the Wrights [illegible] could not hold that [illegible] would only [illegible] and [illegible] to play the aeroplane on [illegible] would [illegible] for [illegible] ways of [illegible]. The [illegible] very well balanced, with a [illegible] balance of

machine is only found by trial, as no one seems to know anything about it, and the practical people say the scientific theory proves it all wrong.

L[illegible] F. B[illegible]

## THE FERGUSON AEROPLANE.

[302] With reference to the interesting [illegible] letter from Mr. Harry G. Ferguson, of Belfast, [illegible] reconstruction [illegible] of my [illegible] building [illegible] I would like to ask a few questions.

How [illegible] [illegible] the h.p. required [illegible] for his machine should be [illegible] that Mr. Ferguson uses 35?

Also, if [illegible] how [illegible] with a [illegible] of 30 per cent., Mr. Ferguson has had to try a dozen propellers before he has ever attained a small measure of success?

Perhaps the answer to these questions is that the engine used by Mr. Ferguson only [illegible] h.p.

I cannot understand Mr. Ferguson's [illegible] of such well-known propellers as the [illegible] and [illegible] [illegible].

For the benefit of future [illegible] [illegible] [illegible] all the [illegible] with the [illegible] [illegible].

In conclusion, may I respectfully ask Mr. Ferguson [illegible] necessary [illegible] propellers [illegible] a dozen propellers and two years of [illegible]?

[illegible] you will forgive [illegible]

[illegible]

[303] [illegible] see that Mr. Ferguson has written about his monoplane [illegible] propeller [illegible] failures [illegible] the [illegible] have seen the machine, and I [illegible] the propeller [illegible]

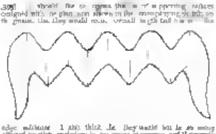
[illegible]

[304] Mr. Ferguson appears to [illegible] somewhat annoying [illegible] his [illegible] propeller [illegible] very good. I do not know [illegible] Mr. Ferguson [illegible] altogether, [illegible] the propeller [illegible] Cochrane [illegible] Mr. Ferguson's own [illegible] in the public [illegible] succeeded in getting his [illegible] performance [illegible] was [illegible] Mr. Ferguson himself [illegible] suggest [illegible] anything [illegible] propeller [illegible] satisfactory [illegible] by Mr. Ferguson [illegible] the [illegible] Cochrane propeller [illegible]

C[illegible] & Co.

## SERRATED CUTTING EDGE.

[305] [illegible] should like to suggest the [illegible] of supporting surfaces designed with the plan [illegible] shown in the [illegible] sketch [illegible] the [illegible] that they would [illegible] overall length [illegible]

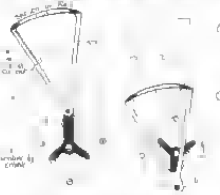


edge [illegible]. I also think that they would not be as easily affected by slight variations in the course of [illegible], and if properly constructed they should be stronger and more durable. The [illegible] portion would [illegible].

[illegible] W. P. [illegible]

## MODEL TANDEM MONOPLANE.

[illegible] my patented design of tandem [illegible] of your [illegible] in a tandem [illegible] [illegible] attached to [illegible]

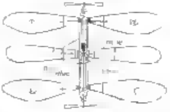


No 1 (DOWN STROKE) No 1 (UP STROKE)

[illegible]

## THE NEW ARMY DIRIGIBLE.

[260] I beg [illegible] to bring to your [illegible] "New Army Dirigible" [illegible]



No 3 PLAN.

[illegible] which have been [illegible]

[illegible]

L. T. [illegible]

## MODEL BIPLANE STABILITY.

[illegible]

## THE SANDERS AEROPLANE—A CORRECTION.

[illegible]

## SOME OTHER ANSWERS AND QUERIES.

### Answers.

[illegible]

### Index and Title Page for Vol. I

In spite of the fact that a very large edition of the Index and Title-page to Vol. I of FLIGHT was prepared it proved to be quite inadequate to meet the enormous demand, and [illegible] the delay in responding to the late applications [illegible]. A second large edition is now ready and copies are being sent off at once.

### "Flight" at Olympia.

Visitors to the Olympia Exhibition, which opens on Friday [illegible] will find FLIGHT located at the same stand as last year against the main entrance in Addison Road, although, owing to a re-arrangement of numbers, the stand number will be 6 instead of [illegible].

Immediately after the last [illegible] on Monday [illegible] building, and [illegible] had got everything cleared ready for the re-arrangement of the building for the forthcoming Exhibition.

* * * *

## POINTS TO NOTE.

[illegible] aeroplanes [illegible] gained by aeroplanes fitted [illegible] used at [illegible].

[illegible] Olympia [illegible] and [illegible] recently extended their facilities [illegible] large number [illegible].

Messrs. [illegible] are the sole agents for the [illegible] which have recently introduced [illegible] of [illegible] light weight [illegible].

The catalogue [illegible] very comprehensive and contains [illegible] particulars of [illegible] will appeal to model [illegible].

* * * *

### PUBLICATIONS RECEIVED.

[illegible] Charing [illegible].

### Catalogues.

[illegible] for Aeroplane Engines. [illegible] Ambrose Shardlow and Co., [illegible] Hills, Sheffield.

* * * *

### NEW COMPANIES REGISTERED.

**Aviation Courses, Ltd.**, 32, Regent Street, S.W.—Capital £[illegible] [illegible].

**British Aeroplane Co., Ltd.** [illegible]. Capital £[illegible].

**Bristol Aviation Co., Ltd.** Clifton [illegible]. Capital £[illegible].

**British and Colonial Aeroplane Co., Ltd.**, Clare Street House, Bristol. Capital £25,000 [illegible]. Directors: Sir George White [illegible] Sir G. White, 500 [illegible] White Smith [illegible].

**British and Colonial Aviation Co., Ltd.** Clare Street [illegible]. Capital £[illegible].

**Callaway Co., Ltd.** [illegible] Chancery Lane, [illegible]. Capital £[illegible] [illegible].

**Huntingdon Aviation Courses, Ltd.**, 32, Regent Street, S.W. Capital £2,000 [illegible].

**Lane's British Aeroplanes, Ltd.**—Capital £[illegible] [illegible] aeroplane [illegible] Lane at 31 [illegible] Street, [illegible] King's [illegible] Street, [illegible] London.

**Motorplanes, Ltd.** [illegible] Wigan.—Capital £[illegible], in £[illegible] shares.

## DIARY OF FORTHCOMING EVENTS.

### British Events.

| | | |
|---|---|---|
| 1910<br>Mar. 18–[illegible] | [illegible] Exhibition [illegible] Olympia | [illegible] |
| July [illegible] | [illegible] Meeting. | |

### Foreign Events.

| | | | |
|---|---|---|---|
| 1910<br>April [illegible] | [illegible] | July [illegible] | [illegible] |
| April [illegible] | Cannes. | [illegible]–Aug. | [illegible] |
| April [illegible] | Nice. | Aug. [illegible]–Sept. | [illegible] |
| May [illegible] | [illegible] | Sept. [illegible] | [illegible] |
| May [illegible] | Lyons. | Sept. [illegible]–Oct. [illegible] | Milan. |
| May [illegible] | Verona. | Oct. [illegible] | [illegible] Gordon-Bennett Balloon Race. |
| June [illegible] | Vienna. | | |
| June [illegible] | Budapest. | | |
| June [illegible] | St. Petersburg. | [illegible]–Nov. | [illegible] |
| June [illegible] | Rheims. | | |

### Aeronautical Patents Published.

Applied for in 1909.

Published [illegible] 1910.

[illegible]

## BACK NUMBERS OF "FLIGHT."

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| | | | | s. | d. |
|---|---|---|---|---|---|
| [illegible] Jan. [illegible] | [illegible] contains | [illegible] | Table of Propellers | [illegible] | 0 |
| | | | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | | Engines [illegible] Paris Show | 1 | 6 |
| [illegible] | [illegible] | | How Men Fly | | [illegible] |
| | | | Aeronautical Bibliography | | |
| | | | Wright Bros. Elevator Patents | | |
| [illegible] | [illegible] | | Flying [illegible] | [illegible] | [illegible] |
| | | | Illustrated Glossary | | |
| [illegible] Mar. | [illegible] | | [illegible] Side of Flying | [illegible] | [illegible] |
| | | | Aero Club Ground at Eastchurch | | |
| | | | Military Aeronautics | | |
| [illegible] | [illegible] | [illegible] | [illegible] Supplement | | 6 |
| [illegible] Apr. | [illegible] | [illegible] | Engines at Olympia | [illegible] | [illegible] |
| [illegible] | [illegible] | | Price List | 3 | [illegible] |
| | | | Models at Olympia | | |
| 31 | July 3 | [illegible] | [illegible] | [illegible] | [illegible] |
| | | | (Full page drawing) | | |

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